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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/925,932 | 08/09/2001 | Philip Victor Harman | 006020.00012 | 4929 |

22907 7590 10/19/2004

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EXAMINER

BALI, VIKKRAM

| ART UNIT | PAPER NUMBER |
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2623

DATE MAILED: 10/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/925,932

Applicant(s)

HARMAN ET AL.

Examiner

Vikram Bali

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2001.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-61 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-6, 8, 9, 16-21, 23-27, 31-36, 38-44, 46-48, 50-57 and 59 is/are rejected.
7) ☒ Claim(s) 7, 10-15, 22, 28-30, 37, 45, 49, 58, 60 and 61 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-6, 8-9, 16-21, 23-27, 31-36, 38-44, 46-48, 50-57, and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chimoto (EU 0676724 A2) in view of Harman (WO 99/30280).

With respect to claim 1, Chimoto discloses creating depth map including assigning a depth to the pixel or the portion of the image, (see page 4, lines 29-31, giving values of depth information to all vertices), utilizing the depth, image characteristics and the location getting the configuration of a first algorithm to ascertain the depth characteristics as a function and utilizing the first algorithm to calculate the depth map, (see page 4, lines 32-34 and 36-37 and see page 5, lines 20-30, the data is sent to the processor 14 to transform the data), as claimed. However, he fails to disclose the determining the relative location and image characteristics of the pixel, and the depth characteristics form a depth map, as claimed. Harman teaches a depth creation where the location of the object is determined (page 6 line 6); and the characteristics of the image is use to get the depth (see page 7, line 9-10), and the depth characteristics form a depth map, (see page 7, lines 2-8) as claimed. It would have been obvious to one ordinary skilled in the art at the time of invention to combine the two references because they are analogous because they are solving the similar problem of creating the depth map for image processing. The teachings of Harman to use the location and the image characteristics for the purpose of depth mapping as this improves the image conversion and the encoding for the purpose of object detection of compression of the image.

With respect to claim 2 and 3, Harman further teaches the image characteristics include RGB and reassigning the depth, (see page 7, lines 9-10 the colour and the colour includes the component of RGB, and lines 3-4 of page 7 for operator assignment of the depth values) as claimed.

With respect to claims 4 and 5, Chimoto further discloses the image characteristics include luminance, (see page 5, lines 32 for the luminance) and depth includes the x,y as location and the RGB as the color, (see page 5, lines 31-32 wherein the mapping is done using the luminance data of each vertex data and vertex data is the coordinates i.e. x,y) as claimed.

With respect to claim 6, Harman further teaches the learning algorithm for the purpose of depth creation (see page 7, lines 11-12 neural networks to be utilize to determine the depth map) as claimed.

With respect to claim 8 and 9, Harman further teaches a random component is introduced to the learning algorithm and the component be positive or negative, (see page 5 lines 21-22) as claimed.

Claims 16-21 and 23-24 are rejected for the same reasons as set forth in the rejection of claims 1-6 and 8-9, because claims 16-21 and 23-24 are claiming similar subject matter as claims 1-6 and 8-9.

With respect to claims 25-27, Harman further teaches the learning algorithm identifies the similar characteristics and similar characteristics are searched with in a radius and the search radius varies for each characteristics, (see page 7, lines 17-20, wherein the news reader is the generic format and the computer i.e. the learning algorithm attempt to locate the head and the shoulders of the news reader i.e. identifying similar characteristics, and the search radius the news reader and the search radius varies as the adjustment to any object as selected) as claimed.

Claims 31, 33-35 are rejected for the same reasons as set forth in the rejection of claims 1, 2, 4, 6, because claims 31, 33-35 are claiming similar subject matter as claims 1, 2, 4, 6 respectively.

With respect to claim 32 and 38, Harman further teaches at least two depth maps are received, and configuration are created for each pair of frames (see page 7, lines 4-6) as claimed.

With respect to claim 36, Harman further teaches learning algorithm is back propagation algorithm, (see page 7, lines 21-23, computer program learn from the corrections to improve the results) as claimed.

Claims 39-44 and 46 are rejected for the same reasons as set forth in the rejection of claims 1, 32, 2, 4, 6, 36 and 38, because claims 39-44 and 46 are claiming similar subject matter as claims 1, 32, 2, 4, 6, 36 and 38 respectively.

Claim 47 is rejected for the same reasons as set forth in the rejection of claims 1, furthermore, Harman, teaches the maps for at least two frames (see page 7, lines 5-8) as claimed.

With respect to claim 48, Harman further teaches considering the key frames for the further depth maps, (see page 7, lines 7-12, computer assigns the variation in the depth based upon the object "depth map" over the time, and difference in the previous and the current future frames) as claimed.

Claims 50-52 are rejected for the same reasons as set forth in the rejection of claims 1+31+47, 48, because claims 50, 51-52 are claiming similar subject matter as claims 1+31+47, and 48 respectively.

Claims 53-57 and 59 are rejected for the same reasons as set forth in the rejection of claims 1, 2, 4, 6, 36 and 38, because claims 53-57 and 59 are claiming similar subject matter as claims 1, 2, 4, 6, 36 and 38 respectively.

Allowable Subject Matter


4. Claims 7, 10-15, 22, 28-30, 37, 45, 49, 58, 60 and 61 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vikkram Bali whose telephone number is 703.305.4510. The examiner can normally be reached on 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 703.308.6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Vikkram Bali
Primary Examiner
Art Unit 2623



vb
October 7, 2004